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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/622,731      | 08/21/2000  | Omer Shibolet        | 032/01702           | 8988             |

26418 7590 07/28/2003

REED SMITH, LLP  
ATTN: PATENT RECORDS DEPARTMENT  
599 LEXINGTON AVENUE, 29TH FLOOR  
NEW YORK, NY 10022-7650

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| EXAMINER |
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VO, CLIFF N

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| ART UNIT | PAPER NUMBER |
|----------|--------------|

2671

DATE MAILED: 07/28/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

*Supplemental*

**Office Action Summary**

Application No.

09/622,731

Applicant(s)

SHIBOLET, OMER

Examiner

CLIFF N VO

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 August 2000.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-70 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 53 and 54 is/are allowed.
- 6) ☒ Claim(s) 1-47, 56, 57, 64 and 65 is/are rejected.
- 7) ☒ Claim(s) 25, 29-40, 46-47, 50-52 and 60-70 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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### **DETAILED ACTION**

1. The Notice of Abandonment mailed March 25, 2003 has been withdrawn.

This Supplemental Office Action is in response to the Preliminary Amendment filed 8/17/2000 and replacing the Office Action mailed 7/2/2002.

### ***Information Disclosure Statement***

2. The IDS paper filed September 25, 2000 has been received and placed in the record of file.

### ***Specification***

3. This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b).  
An abstract on a separate sheet is required.

### ***Claim Rejections - 35 USC § 112***

4. Claims 1-47, 56-57 and 64-65 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per independent claim 1 (line 6), the term "a penalty" is considered to be vague and indefinite.

As per claim 2 (line 2), the term "said penalty function" lacks antecedent basis.

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Claims 3-47 and 64-65 depend on claim 1, they are rejected with the same reason as set forth in claim 1.

As per claim 56-57 (line 1), the term "said penalty function" lacks antecedent basis.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-24, 26-28, 41-45, 48-49 and 53-59 are rejected under 35 U.S.C. 102(b) as being anticipated by Lorensen et al (U.S. Patent No. 5,611,025).

As per independent claim 1, Lorensen et al disclose a virtual internal cavity inspection system comprising a step of providing a medical imaging data set representing a cavity and a boundary (col.3, lines 5-22), a step of providing a plurality of points in the data set including at least a starting point and an ending point (col.3, lines 25-45), and a step of automatically determining a path between the starting point and the ending point responsive to a penalty associated with passing through various points in the cavity (col.4, line 39 through col.5, line 15).

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As per dependent claims 2-3, Lorensen et al further teach wherein the penalty function is responsive to a morphology, which comprises a width, of the cavity (col.4, line 39 through col.5, line 15).

As per claim 4, Lorensen et al further teach wherein the morphology is a local morphology (col.6, lines 22-34).

As per claim 5, Lorensen et al further teach wherein the penalty function is responsive to the path (col.4, lines 39-61).

As per claim 6, Lorensen et al further teach wherein the penalty function is response to an amount of local blending of the path (col.4, lines 39-61).

As per claims 7-8, Lorensen et al further teach automatically determining a trajectory of an original of a viewpoint and wherein providing a plurality of points comprises providing a trajectory (col.5, lines 6-15).

As per claim 9, Lorensen et al further teach automatically determining a trajectory of an aiming point (col.4, line 62 through col.5, line 5).

As per claim 10, Lorensen et al further teach a step of generating stereo image comprising two separate images taken at different angle (col.5, lines 29-33) which inherently teaches the features as now claimed.

As per claims 11-15, Lorensen et al further teach the features as now claimed at col.4, lines 45-47 and col.6, lines 22-34.

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As per claims 16-24, 26-28, 41-45, 48-49, Lorensen et al further disclose various data processing steps for providing path planning which anticipates the features as now claimed.

Due to the similarity of claims 48-49 and 55-59 to claims 1-4, they are rejected under a similar rationale.

*Allowable Subject Matter*

7. Claims 25, 29-40, 46-47, 50-52 and 60-70 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. Claims 53-54 are allowed.


*Conclusion*

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cliff N. Vo whose telephone number is (703) 305-9594. He can normally be reached Monday-Friday and alternate Monday from 8:00am-5:30pm.

If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Mark Zimmerman, can be reached at (703) 305-9798. The fax phone number for this Group is (703) 305-9724.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3800.

May 15, 2003

  
CLIFF N. VO  
PRIMARY EXAMINER